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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,469	10/28/2003	Varghese George	42P17017	6926

8791 7590 04/27/2007

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EXAMINER	
PATEL, ANAND B	
ART UNIT	**PAPER NUMBER**
2116	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/696,469	GEORGE ET AL.	
	Examiner	Art Unit	
	Anand Patel	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-6 and 24-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *24-34* is/are allowed.

6)☒ Claim(s) *1,2 and 4-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Amendment filed 3/2/07 has been entered and as such claims 1, 2, 5 are amended, claims 3, 7-23 are canceled and claims 24-34 are added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 5812860 to Horden in view of US Patent No 5940785 to Georgiou et al (hereinafter Georgiou).

- As per claim 1, Horden discloses a method for operating a integrated device within an operating range comprising:
  - Enabling a reduced power operating mode in response to a condition for the integrated device (column 2, lines 8-25; column 4, lines 12-37);
  - Changing the integrated device's voltage from a first voltage to a second voltage upon activation of the reduced power operating mode (figure 2c; column 4, lines 34-37); and
  - Operating the integrated device at a frequency within the operating range based at least in part on a desired amount of power reduction (figure 2c; column 4, lines 34-37).

  Horden fails to disclose wherein the condition is a thermal condition. Georgiou teaches varying frequency and voltage based on a thermal condition (column 2, lines 16-46). An advantage of the system taught by Georgiou is the ability to improve reliability while controlling power dissipation (column 2, lines 10-14). It would have been obvious to one of ordinary skill in the art at the time

of invention to modify Horden with the thermal condition as taught by Georgiou. Motivation to modify is to improve reliability and cut power consumption.

- As per claim 2, Horden discloses the method wherein the first voltage is a nominal operating voltage (2.75V) and the second voltage is a reduced voltage (2V) that is defined during manufacture of the integrated device (column 4, lines 1-5).
- As per claim 6, Horden discloses the method wherein the integrated device is a processor (1).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horden, in view of Georgiou and US Patent No 6772356 to Qureshi et al (Qureshi).

- As per claim 4, Horden and Georgiou fail to disclose wherein the second voltage is stored in fuses. Qureshi teaches wherein a voltage is stored into a plurality of fuses (column 4, lines 20-23). An advantage of the system is the ability to modify voltage and frequency settings to increase power savings (column 2, lines 36-43). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Horden and Georgiou with the storage of voltage in fuses as taught by Qureshi. Motivation to modify is to decrease power requirements.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horden, in view of Georgiou and US Patent No 6385735 to Wilson et al (Wilson).

- As per claim 5, Horden and Georgiou fail to disclose details of bus ratios. Wilson discloses wherein a bus ratio utilized in the reduced power operating mode is less than a maximum bus ratio for the integrated device and is calculated based on subtraction of an offset from the maximum bus ratio, the offset is based at least in part on the supported bus frequency of the integrated device (column 5, lines 10-15, 17-50; column 6, lines 20-36). An advantage of the system taught by Wilson is the ability to protect processor cores while allowing adjustments to maximum clock frequencies (column 2, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time of invention to

modify Horden and Georgiou with the bus ratio system as taught by Wilson. Motivation to modify is to increase system flexibility.

Allowable Subject Matter

6. Claims 24-34 are allowed. US Patent No 6288395 to Kuhnly et al discloses a thermal monitor to be enabled if a temperature meets or exceeds a threshold value. Prior art fails to disclose or suggest a multiplexer to receive a plurality of offset values and a bus frequency that is supported by the integrated circuit and to forward one of the offset values based at least in part on the bus frequency, and a logic unit to determine a thermal event bus ratio based on a difference between an initial bus ratio and the selected offset value, determine if the thermal event bus ratio is at least equal to a minimum bus ratio, and to change a voltage and frequency of the integrated circuit if the temperature meets or exceeds the threshold value.

Response to Arguments

7. Applicant's arguments with respect to claims 1-2, 4-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Patel whose telephone number is (571) 272-7211. The examiner can normally be reached on Mon-Fri 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ABP

REHANA PERVEEN
SUPERVISORY PATENT EXAMINER
4/11/07